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PTO/SB/21 (09-04)

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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/676,152
	Filing Date	September 29, 2003
	First Named Inventor	Bultan et al.
	Art Unit	2611
	Examiner Name	Dac V. Ha
Total Number of Pages in This Submission	Attorney Docket Number	I-2-0392.1US

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Form PTOL-85; and Form PTO-1449 (2 pgs. w/ a copy of the translation of the Korean Office Action and copies of two (2) references).
<div>Remarks</div>		

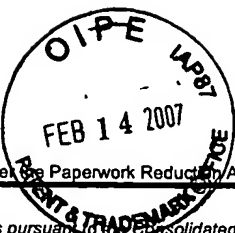
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	VOLPE AND KOENIG, P.C.		
Signature	<i>Scott Wolinsky</i>		
Printed name	Scott Wolinsky		
Date	February 12, 2007	Reg. No.	46,413

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature	<i>Scott Wolinsky</i>		
Typed or printed name	Scott Wolinsky	Date	February 12, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (01-06)

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 1,892.00

**Complete if Known**

Application Number 10/676,152

Filing Date September 29, 2003

First Named Inventor Bultan et al.

Examiner Name Dac V. Ha

Art Unit 2611

Attorney Docket No. I-2-0392.1US

**METHOD OF PAYMENT** (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_  
☒ Deposit Account Deposit Account Number: 09-0435 Deposit Account Name: InterDigital Communications Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee  
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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**FEE CALCULATION** (All the fees below are due upon filing or may be subject to a surcharge.)**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
<b>Total Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
-	x	= 0
HP = highest number of total claims paid for, if greater than 20.		
<b>Indep. Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
-	x	= 0
HP = highest number of independent claims paid for, if greater than 3.		

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
-	-	-	-	-

- 100 = / 50 = (round up to a whole number) x = 0

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Issue Fee, Publication Fee &amp; 4 Copies of Patent &amp; IDS

Fees Paid (\$)

1892.00

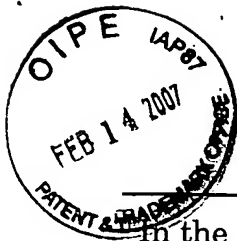
**SUBMITTED BY**

Signature	<i>Scott Wolinsky</i>	Registration No. 46,413 (Attorney/Agent)	Telephone 215-568-6400
Name (Print/Type)	Scott Wolinsky		Date February 12, 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

Bultan et al.

**Application No.:** 10/676,152

**Confirmation No.:** 6411

**Filed:** September 29, 2003

**For:** OPTIMUM INTERPOLATOR METHOD  
AND APPARATUS FOR DIGITAL  
TIMING ADJUSTMENT

**Group:** 2611

**Examiner:** Dac V Ha

**Our File:** I-2-0392.1US

**Date:** February 12, 2007

**INFORMATION DISCLOSURE STATEMENT  
INCLUDING RULE 1.704(d) STATEMENT**

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form.

The listed references include references previously cited in this application. Newly cited documents are indicated by an asterisk (\*). Copies of the newly cited documents are enclosed.

Pursuant to 37 C.F.R. § 1.97(e)(1), the undersigned certifies that each new item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, copy enclosed, and that this communication was not received by any individual designated in §1.56(c) more than three (3) months prior to the filing of this Information Disclosure Statement.

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01 FC:1806

Pursuant to 37 C.F.R. § 1.704(d), the undersigned certifies that each new item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, copy enclosed, and that this communication was not received by any individual designated in § 1.56(c) more than thirty (30) days prior to the filing of this Information Disclosure Statement.

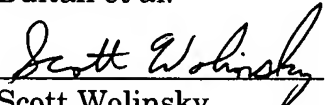
The source of the newly identified items of information is the enclosed communication from a foreign patent office in a counterpart application, dated January 12, 2007.

This Information Disclosure Statement is being filed with the fee required by 37 C.F.R. § 1.17(p).

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO-1449 form indicating his consideration of the cited materials.

Respectfully submitted,

Bultan et al.

By   
Scott Wolinsky  
Registration No. 46,413  
(215) 568-6400

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103

SW/l  
Enclosures (4)



FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0392.1US	SERIAL NO. 10/676,152
	APPLICANT Bultan et al.	
	FILING DATE September 29, 2003	GROUP 2611

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,313,885 B1	11/2001	Patel et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		1 204 215	05/2002	EP				
	*	2001-0010342	02/2001	KR			X	
	*	2002-0052440	07/2002	KR			X	

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		A.V. Oppenheim, "Digital Signal Processing," 1975, Prentice Hall, New Jersey.
		R.E. Crochiere et al., "Multirate Digital Signal Processing," 1983, Prentice Hall, New Jersey.
		H. Meyr et al., "Digital Communication Receivers," A Wiley-Interscience Publication, 1998, John Wiley and Sons, New York.

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				ATTY. DOCKET NO. I-2-0392.1US		SERIAL NO. 10/676,152	
				APPLICANT Bultan et al.			
				FILING DATE September 29, 2003		GROUP 2611	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
		F.M. Garner, "Interpolation in Digital Modems – Part I: Fundamentals," IEEE Transactions on Communications, Vol. 41, No. 3, March 1993, pgs. 501-507.
		L. Erup et al., "Interpolation in Digital Modems – Part II: Implementation and Performance," IEEE Transactions On Communications, Vol. 41, No. 6, June 1993, pgs. 998-1008.
		Wu, Yik-Chung et al. "FPGA Implementation of Digital Timing Recovery in Software Radio Receiver", Circuits and Systems, 2000. IEEE APCCAS 2000. The 2000 IEEE Asia-Pacific Conference on Dec. 4-6, 2000, Piscataway, NJ USA, IEEE, pp. 703-707.

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.